

## Original Article

# Structural Model for Public Health Nurses' Performance in the Implementation of Family Nursing Based on Nursing Relational Capital

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## Abstract

**Background:** The family nursing care model developed in this research integrates Nursing Intellectual Capital (NIC) theory, goal attainment theory and Family Centered Nursing (FCN). Good nurse performance in performing family nursing care will influence the family's independence in caring for sick family members. The aim of study want to develop structural model for improving the performance of public health nurses (PHN) in the implementation of family health nursing (FHN) based on nursing relational capital (NRC).

**Method:** An observasional analytic study conducted to measure performance 110 of PHN in Surabaya City of Indonesia with multistage random sampling. Structural questionnaires were used to measure nursing structural capital, nursing human capital, client factors, family, nursing relational capital, and the performance of the nurses. Data analysis used descriptive analytic, testing model partial least square (PLS) software. Fit model was obtained through the goodness of fit.

**Results:** The structural model developed in this study is very strong with a GoF value of 0.460. The results of the first stage of research reveal that the structural model testing (outer model) of all indicators which are nursing structural capital, nursing human capital, client factor, family, nursing relational capital and performance have a value of loading factor > 0.5. The path diagram analysis on all exogenous variables obtained t-statistic > from t-table, except for structural capital nursing to nursing relational capital with t-statistic 0.178 < t-table equal to 1.96.

**Conclusion and Recommendation:** The theory of nursing intellectual capital, goal attainment theory and family center nursing theory form the model of FHN can improve the implementation of family nursing care. The implementation of this model needs support from policy makers and cross-program cooperation in public health center. Therefore, PHN can improve the implementation of FHN.

**Keywords:** Public health nurses, family health nursing, nursing relational capital

## Introduction

The implementation of family nursing care is a form of nurse performance that plays an important role in the success of health development. However, it has not been implemented optimally. Data on the evaluation of the role and function of public health nurses in remote community health centers in 10

provinces in 2005 reveal that family nursing care has not been implemented optimally (Kemenkes R.I, 2010). The results of National Health Facility Research in 2011 show that the achievement of family nursing service in Public Health Center (PHC) throughout Indonesia is 61% from the national target

(Kemenkes R.I., 2012). In East Java in 2013 the achievements were 63%; in Surabaya, it was 24%.

Nurses have a key role and function in providing nursing care to individuals, families, groups and communities. The implementation of family nursing care is a form of nurse performance that has not been implemented optimally. Family nursing care carried out so far focuses on families as clients. The theory used is family centered nursing. The weakness of this theory is that it has not considered the nurse factor and its interaction in performing family nursing services.

The development of family nursing model in this research can improve nurse performance. The performance of nurses can be influenced by capitals derived from nurses, means, clients and families as well as interactions built through cooperation. This model is built from the theory of Nursing Intellectual Capital (NIC), the theory of Goal Attainment and Family Centered Nursing (FCN). The first theory integrated is the theory of intellectual capital. This theory consists of three domains: Human Capital, Structural Capital and Correlational Capital (Bontis, Choo, 2002).

### **Theoretical Framework**

The development of intellectual capital theory in nursing is the theory of nursing intellectual capital developed by Covell in 2011. This theory effectively uses knowledge resources to gain benefits for the organization. In nursing, knowledge capital is very important in the implementation of nursing care. The complexity of nursing problems experienced by clients that are personal and unique requires a special approach through the process of interaction using appropriate knowledge of nurses. This interaction can increase motivation and impact on improving the performance of nurses in implementing family nursing care. The results explain the effect of nursing intellectual capital on improving the quality of nursing service and registered nurse retention (Covell, 2011). Different from intellectual capital, this theory uses two domains of nursing: human capital and nursing structural capital. Relational capital has not been developed in Covell's study.

The human capital of nursing referred to in this theory includes knowledge, abilities, talents, nurse experience, competence, motivation, commitment and leadership (Covell, 2011; Kamukama, et.al, 2010; Bontis-Fitz-enz, Jack, 2002). Human capital is affecting the structural capital that is in the form of facilities needed in implementing family nursing care

(Bontis Fits- Enz, 2002). Structural capital in this research includes the guideline of family nursing service, standard of operational procedure and documentation format of family nursing care. This structural capital is influenced by human capital (Bontis, Choo, 2002). Nurses perform family nursing care based on family nursing care guidelines; they perform nursing actions based on standard operational procedures and use family nursing care formats to document nursing care that has been implemented. The results of Covell's study (2011) explain that the structural capital of nursing affects the improvement of nursing service quality. Human and structural capital affect the interaction built into the relationship capital.

Domain capital relations (relational capital) affect performance (Kamukama, Ahiauzu, Ntayi, 2010). The importance of this interaction is inconsistent with research from Covell (2011) which excludes the domain of nursing relational capital from the domains affecting the quality of nursing services. Related to the interaction, nursing care, according to Law N0.38 year 2014, is a series of interaction process between nurses with clients and the environment to meet the clients' needs and achieve independence. Therefore, interaction is a very important component in the implementation of nursing care. Given the importance of interaction, the novelty of this research is developing the theory of nursing intellectual capital by incorporating the relational capital component in nursing (nursing relational capital) as a domain affecting the performance of nurses. The nursing relational capital component was developed by integrating the King's goal attainment theory with the aim of clarifying the interaction process that occurred. Interaction on the personal system is defined as nurses' interaction with themselves. The personal dimension is one component that affects the performance of nurses (Riggio, Shelby, 2000). Interpersonal dimension is an interaction system built by nurses with clients, families and inter nurses. Interpersonal interaction requires communication skills. Cooperation undertaken by nurses is an interaction between nurses, nurses with health teams and clients and the environment (King, 1981 in Alligood, 2014). Nursing cooperation with the health team (interprofessional collaboration) is a process of communication and interaction between teams in decision-making to improve clients' knowledge and skills (Diane R. Bridges, et al., 2011).

Families as the target require approaches with specific strategies because of cultural, racial, ethnic,

and socioeconomic differences (Friedman, et al., 2003). Family centered nursing theory needs to be integrated with the theory of nursing intellectual capital and goal attainment theory because of the factors. Family factors that need to be studied in this theory are family structure, function and coping. Friedman et al. (2003) explain that family structure, function and coping reflect interactions in the family and the environment. The family structure includes patterns of communication, roles, and values within the family. Family functions consist of affective function, socialization, health care, economy and reproduction. Family coping involves family efforts in solving problems that occur with respect to the care of family members (Friedman et al., 2003).

The family nursing care model developed in this research integrates Nursing Intellectual Capital (NIC) theory, goal attainment theory and Family Centered Nursing (FCN). This model will improve the performance of nurses in implementing family nursing care through the transaction process. Good nurse performance in performing family nursing care will influence the family's independence in caring for sick family members. The purpose of this research is to develop a model of nurses' performance in improving nursing family based on nursing relational capital (NRC) in Surabaya, Indonesia.

## Methods

### Design and Sample

The research method used observational analytic study. Testing model employed Partial Least Square (PLS) software. Research location was in Surabaya, East Java Indonesia.

This study involved 175 civil servant nurses who have a diploma of nursing at PHC area of Surabaya Health Office. This region was chosen because the percentage of implementation of family nursing care in Surabaya is 22-24% lower than the percentage of East Java Province and the target of the Ministry of Health R.I. The sample of this research is part of nurses which fulfill population criterion that is 110 person.

Sample calculation used rule of the thumb (5-10 times from variable observed). The sampling was done with multistage sampling technique. In the first stage, simple random sampling was used to determine the sample by randomly selecting 6 PHC in each region of North, West, East, South and Central Surabaya. So, 30 PHC were determined. The number of respondents per PHC =  $110 : 30 = 3.67$  or between 3-4 respondents. In the second phase, each

selected PHC was randomly assigned to 3-4 nurses who were determined as a sample of the study using simple random sampling to find 110 people who were designated as respondents. Nurses who were on leave or got a job out of town was excluded. Research ethics was obtained from Research Ethics Commission of Health Faculty of Public Health, Airlangga University.

### Data Collection

The respondents were given an explanation about the research before signing the consent. Then, they were given a questionnaire. Researchers were in place as long as the respondents filled out the questionnaire. Once completed, the researcher checked the completion of the questionnaire.

The data collection tool used in this study is a questionnaire developed from variable research factors that affect the performance of nurses in implementing family nursing care. The next step is to test the construct and content validity. To obtain high validity, the question was prepared by considering relevant theories, adjust the contents of the questions with the condition of the respondents, trials, questionnaires and test the validity of the questionnaire. The internal validity of each question was tested using corrected item-total correlation with the validity of correlation coefficient ( $r$ ) is 0.25-0.30. The instrument reliability test was performed to determine the consistency of the instrument used. Reliability is described in the form of 1 correlation coefficient showing perfectly reliable and 0 value is not reliable. The instrument is considered reliable if the value of Cronbach's alpha  $> 0.6$ . The instrument of this study is reliable because the value  $> 0.6$ .

Questionnaire nursing structural capital (X1) consists of the questionnaire of nursing service guidance family of 6 statements; standard questionnaire of operational procedure consists of 9 statements and the document format of nursing care family consists of 12 statements. Questionnaire is a closed statement using Likert scale (never = 0, rarely = 1, sometimes = 2, often = 3, always = 4). The assessment is based on the number of statements multiplied by 4; the multiplication is divided into three categories based on good, enough and less valuation. Questionnaire nursing human capital (X2) is divided into four categories, namely: the questionnaire about the knowledge of family nursing care, motivation, nurse commitment and clinical judgment. The questionnaire on family nursing care knowledge used a dichotomy scale with a total of 10 statements. The motivational questionnaire and commitment of the

nurses used a likert scale with a total of 12 statements for nurse motivation and 6 statements for nurse commitment. The clinical assessment questionnaire consisted of 8 statements. The rating is based on the number of statements with the following value: strongly disagree = 1, disagree = 2, agree = 3, strongly agree = 4. The scoring categories are good, sufficient and lacking. Client factor questionnaire (X3) consists of the physical and psychological conditions of the client. Assessment based on closed statement used Likert scale (never, rare, sometimes, often, and always) with 9 statements. Questionnaire Family factor (X4) is divided into three categories namely family structure, family function and family coping. The Questionnaire used Likert scale. Structure family consists of 5 statements; family functions comprises 7 statements and coping family consists of 4 statements. The assessment is based on closed statements by using Likert scale (never, rare, sometimes, often, and always). The assessment categories are good, sufficient and lacking. The questionnaire of nursing relational capital (X5) used Likert scale with tiered scale. The choices of answers of the selected statement consist of never, rarely, frequently, and always. The questionnaire is divided into 3 categories, namely personal interaction which consists of 5 statements, nurse interaction with clients, family and other nurses which consists of 9 statements and cooperation with other professions which consists of 4 statements.

The assessment based on the number of statements with the value of each response is never = 0, rarely = 1, sometimes = 2, often = 3, always = 4. Assessment is based on the number of statements multiplied by 4. The multiplication is divided into three categories based on good, enough and less valuation. The transaction questionnaire (Performance) (Y1) consists of two categories namely health education and nursing actions. It used Likert scale. The statement of health education consists of 7 statements and 9 nursing actions statements. The assessme

nt based on the number of statements with the value of each response is never = 0, rarely = 1, sometimes = 2, often = 3, always = 4. The assessment categories are good, sufficient and lacking. All of the variables used in this study are showed in Figure 1.

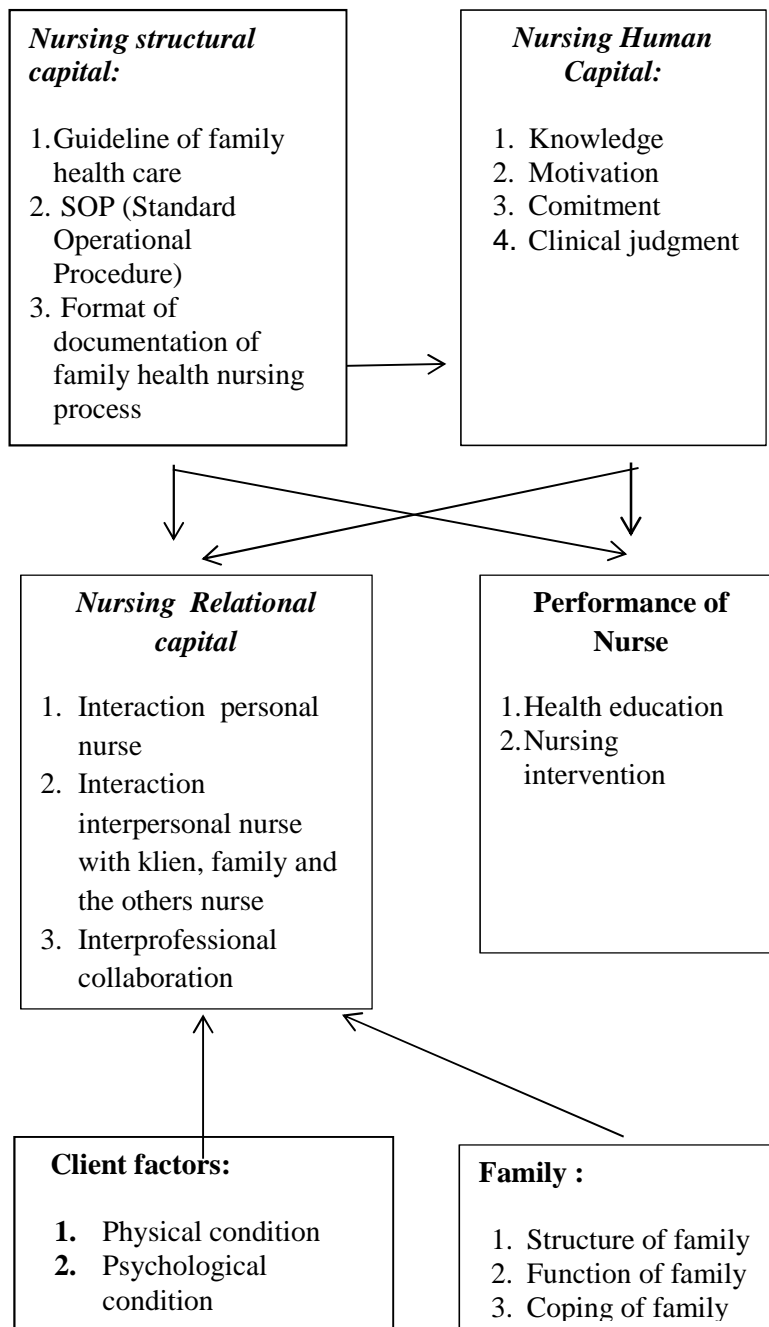
The variables were test of validity with content analyses of four expert panels in public health nursing, and then variable were tested of reliability using Cronbach alpha (Table 1).

## Data analysis

Data analysis was done descriptively and inferentially. Descriptive data analysis was to identify factors influencing the performance of nurses of PHC in implementing family nursing care. This descriptive analysis was done by creating a frequency distribution table and calculating the frequency and percentage of the measured aspect. The description of each indicator is expressed in the frequency value. This descriptive analysis can obtain an overview of the factors that influence the performance of nurses of PHC in implementing family nursing care. Diferential analysis was used to test the empirical models and hypotheses proposed in this study. The analytical technique used is a structural equation modeling (SEM) based on variance or component based SEM, known as Partial Least Square (PLS). PLS handles reflective and formative models, even constructs with single item (indicator) (Hair et al., 2010). This research uses structural model to fulfill the recursive model. The indicators of the research variables are: nursing structural capital (X1) factor, nursing human capital (X2) factor, client factor (X3), family factor (X4), nursing relational capital (X5), nurse performance (Y1) and family independence (Y2). Each factor has a reflective indicator.

## Results

The respondents were 110 people; 63.4% were productive aged 31-40 years old, 62.5% were female; 94.5% of the participants were married; 81.8% had a diploma of nursing and 46.7% had worked for less than 10 years. The minimum work duration is 2 years. The results of the testing of structural model (outer model) reveal that all the indicators from nursing structural capital, nursing human capital, client factor, family, nursing relational capital and performance have loading factor value  $> 0.5$ , so that all indicators are valid and can explain the construct variable (Table 2). The path diagram analysis that has been found in all exogenous variables has a significant effect on the performance because it obtained t-statistic  $>$  from t-table, except for structural capital nursing to nursing relational capital as it obtained t-statistic of  $0.178 <$  t-table equal to 1.96 (Figure 2). Structural model analysis to examine the influence of exogenous factors on endogenous factors resulted in each exogenous variable significantly influencing endogenous variables (Table 3), except the structural nursing structural capital variable to nursing relational capital which is not significant (Figure 3).



**Figure 1. Framework of Development Model of Family Health Nursing Based On Nursing Relational Capital**

**Table 1. Distribution of variable for public health nursing performance based on nursing relational capital**

SubVariabel Model	Variabel	Indicator	Item	M <sub>±</sub> SD	Cronbach	
<i>Nursing structural capital (X1)</i>	Guideline of family nursing care	1. Outcomes of family nursing services	3	20,26 <sub>±</sub> 4,53	0,77	
		2. Nursing intervention	3			
	SOP (Standard operational procedure)	1. Preparing	3	33,90 <sub>±</sub> 4,63	0,71	
		2. Intervention	3			
3. Evaluation		3				
Format documentation of family health nursing	1. Format assessment 2. Format nursing diagnoses 3. Format nursing intervention 4. Format nursing evaluation	1. Format assessment	3	36,02 <sub>±</sub> 4,36	0,89	
		2. Format nursing diagnoses	3			
		3. Format nursing intervention	3			
		4. Format nursing evaluation	3			
<i>Nursing human capital (X2)</i>	Knowledge	1. Definition nursing process	2	63,64 <sub>±</sub> 15,84	0,71	
		2. Assessment	2			
		3. Nursing diagnoses	2			
		4. Nursing intervention	2			
		5. Implementation	2			
		6. Evaluation	2			
	Motivation	1. Responsibilities 2. Awareness 3. The opportunities in the future 4. Reward 5. Team work 6. Supervision	1. Responsibilities	2	38,38 <sub>±</sub> 4,13	0,67
			2. Awareness	2		
			3. The opportunities in the future	2		
			4. Reward	2		
Comitment	1. Affective commitment 2. Continuence commitment	1. Affective commitment	2	18,85 <sub>±</sub> 2,12	0,66	
		2. Continuence commitment	2			

SubVariabel Model	Variabel	Indicator	Item	M <sub>+</sub> SD	Cronbach			
Client factors (X3)	Cinical Judgment	3. Normative commitment	2	13,59 <sub>±</sub> 2,28	0,74			
		1. Decision making for problem solving	4					
	2. Deterining clinical intervention	4						
	1.Increased blood pressure	1	10,92 <sub>±</sub> 2,37			0.65		
Physical condition	Pshycological condition	2.Sign and symptoms	2	13,36 <sub>±</sub> 2,89	0,75			
		3.Related diseases	1					
		1.Sleep disturbance	1					
Family (X4)	Family structure	2.Anger	1	18,40 <sub>±</sub> 3,00	0,81			
		3.Sign and symptom	1					
	4.BWork overload	1						
	5.Lack of response	1						
	1.Communication pattern	2	21,14 <sub>±</sub> 3,58			0,87		
Family function	Family coping	2.Role of family	3	14,79 <sub>±</sub> 2,25	0,68			
		1. Affective function	2					
		2. Interaction function	2					
Nursing relational capital (X4)	Personal interaction	3. Family healthcare function	2	19,48 <sub>±</sub> 2,88				
		1. Problem solving	2					
		2. Sickness respond	2					
		1. Self-orientation	1					
		2. Perception	1					
	Interpersonal interaction	Interprofession collaboration	3. Attention for placing			1	35,14 <sub>±</sub> 5,76	
			4. Attention for timing			1		
			5. Body image			1		
	Performance of nurses (X5)	Health education	1. Self regulated for nurses			3	17,50 <sub>±</sub> 2,30	
			2. Discussion between family and nurse for decission in problem solving			3		
		3. Family involent in intervention	3					
		Collaboration between doctor and nutritionist with nurses	4					
		1.Planning	1	29,20 <sub>±</sub> 4,27	0,96			
		2.Media for health education	1					

SubVariabel Model	Variabel	Indicator	Item	M <sub>+</sub> SD	Cronbach
		3.Implementation	4		
		4.Evaluation	1		
	Nursing intervention	1. Drugs suggestion for client	1	36,77±4,95	0,95
		2. Management for diet	1		
		3. Rehabilitation: physical exercises	2		
		4. Stress management	1		
		5. Measurement of blood pressure	1		
		6. Motivation for check up	1		
		7. Follow up	1		
		8. Suprevison	1		

Tabel 2. Analysis of Outer Model

Variabel	Indicator	Loading Factors	t	p-value
<i>Nursing structural capital</i>	Guideline of family nursing care	0,845	18,834	<0,01
	Standard operational procedure	0,671	5,472	<0,01
	Format documentation of family health nursing	0,671	5,431	<0,01
<i>Nursing human capital</i>	Knowledge	0,660	5,545	<0,01
	Motivation	0,869	20,799	<0,01
	Comitment	0,691	9,769	<0,01
	Cinical Judgment	0,777	16,702	<0,01
Client	Physical condition	0,958	16,989	<0,01
	Pshycological condition	0,676	2,940	<0,01
Family	Family structure	0,885	47,924	<0,01
	Family function	0,848	21,856	<0,01
	Family coping	0,530	4,507	<0,01
<i>Nursing relational capital</i>	Personal interaction	0,575	5,103	<0,01
	Interpersonal interaction	0,866	31,352	<0,01
	Interprofession collaboration	0,687	7,811	<0,01
Performance of nurses	Health education	0,849	20,767	<0,01
	Nursing intervention	0,799	15,602	<0,01



Tabel 3 Analysis Structural Model of Inner Model

Correlational Variabel	<i>r</i>	<i>t</i>	<i>p</i>
(X1) Nursing Structural Capital → (X2) Nursing Human Capital	0,277	3,528	<0,01
(X1) Nursing Structural Capital → (X5) Nursing Relational Capital	-0,015	0,193	<0,01
(X1) Nursing Structural Capital → (Y1) Nursing performance	0,270	2,567	<0,01
(X2) Nursing Human Capital → (X5) Nursing Relational Capital	0,136	2,206	<0,01
(X2) Nursing Human Capital → (Y1) Nursing performance	0,334	4,129	<0,01
(X3) Client → (X5) Nursing Relational Capital	-0,215	2,631	<0,01
(X4) Family → (X5) Nursing Relational Capital	0,808	9,643	<0,01
(X5) Nursing Relational Capital → (Y1) Nursing performance	0,268	2,898	<0,01

## Discussion

Nurses in their work require structural capital of nursing. This capital will give a clear direction to nurses in performing their duty. VanPaemel (2011) explains that work guidelines help meet continuity and equity in the workplace. Standard Operational Procedure (SOP) is also required as a means of communication to implement important policies in a job. SOP helps ensure the consistency and quality of nursing work (Dowglas H., 2003). The approach in SOP is PDCA (Plan, Do, Check, Act). Plan is used to describe client preparation, tools and environment before taking action and purpose of action; do explains the order of nursing actions to be performed; check gives information on how to evaluate clients' responses after nursing action is done, and act explains how to follow up actions that have been done (Chris A., 2016). Another research which concurs with Covell and Sidani (2013) explains that structural capital nursing can affect the improvement of nursing service quality.

Nursing a good human capital will increase the nursing relational capital. Salman (2014) explains that human capital is associated with relational capital. The intended human capital consists of knowledge, skills, attitudes, motivation, competence, ability in producing innovative ideas, ability to give satisfaction to the organization and the best performance. The relationship capital according to Salman (2014) is a collaborative relationship to solve problems, share information, interact to change different ideas, and interact for the development of information, knowledge and skills.

Good cooperation with the team can increase the nurses motivation in implementing family nursing care. The results of Kholifah, et.al. (2016) reveal that good cooperation between health teams can improve motivation in implementing family nursing care. Nurses need others as work teams. Nursing relationships with other health teams such as doctors and nutritionists in implementing family nursing care with hypertension have an effect on their motivation. Naylor and Johnson (2011) explain that the cooperation between nurses with various professions (interprofessional collaboration) can improve human resources. Gittel, et.al. (2013) state that the sharing of knowledge and skills can occur during the collaboration process with the

team. Nurses will gain additional knowledge and skills so that they will improve the nurses' ability in implementing family nursing care. Nursing human capital will improve the performance of nurses in implementing family nursing actions and health education. The nurses' performance is defined as what is done, how to do it and the results achieved from the nursing actions that have been done (Wibowo, 2014). Covell and Sidani (2013) explain that nursing human capital affects the quality of nursing services. The human capital of nursing can be explained by indicators of knowledge, motivation, commitment and clinical judgment.

Good client factors are not followed by increased nursing relational capital. Research data reveal that most of the physical and psychological conditions of clients are in less category. Physical state is a condition that appears or can be observed with the senses. Physical conditions affect communication (Perry & Potter, 2009). It can be explained that when a sick client feels uncomfortable, it will affect the response to others. Delivery of messages from nurses to clients about health information may not be well received. Psychological conditions affect the interaction between the client and the nurse (Perry & Potter, 2009). Declining client condition will increase nursing relational capital. King states that interactions between environment and health that focus on nursing practice will affect health (Frey, 2003).

The family is a key component of support in home care (Watkins, Edwards & Gastrell, 2003). The family as caregiver requires contact with other nurses and health teams. Griffin and Mc Keever (2000) explain that there are four types of relationships between nurses and families: the relationship between nurse and caregiver (Nurse-helper relationship), the relationship between workers (Worker-worker relationship), relationship between manager and worker (Manager-worker relationship), and relationship between nurse and client (Nurse-patient relationship). The family will get various knowledge and skills related to the care that will be performed on the family members, but there is a clear boundary between the role of nurses and families as caregivers.

Nurses who have good nursing relational capital show good transaction process (performance) in implementing family nursing care. In line with

Riggio's research results, Shelby (2000) states that nurse performance is related to personal dimensions and communication skills. Communication is built by nurses to assist clients in achieving positive adaptation to the environment (King, 1981 in Alligood, M.R., 2014). Johnson (2011) states that recommendations for future interprofessional collaboration are concerned with values and ethics, sensitivity, attention to cultural diversity and differences between teams, unique roles and responsibilities among teams, as well as effective communication in various roles.

The performance model in implementing NRC-based family nursing care is carried out with the stages of nursing assessment activities, the formulation of family nursing diagnoses, the implementation and evaluation of the successful implementation of the action. The emphasis of NRC-based family nursing care is the process of nurse interaction with themselves, among nurses, clients and families and other health teams. The nurses' self-interaction (personal interaction) can assess personal preparedness and self-regulation in performing family nursing care. Gunther (2001) explains that the nurses' self-awareness in making decisions is an important component in achieving the goals. When the nurses are ready to carry out the activity, it will affect their confidence. Readiness work is influenced by physical factors, mental, emotional, knowledge, skills, needs, motives and goals (Slameto, 2010). The results of Putra Mahendra' research (2015) reveal that confidence influences nurses' readiness in work.

In addition to personal interaction, interpersonal interaction should be performed on the NRC-based family-based nursing care. Interpersonal interaction is defined as the cooperation built by nurses with other nurses, clients, and families. The elements of interpersonal interaction are interaction, communication, transactions, roles and stress (King, in Gonzalo, 2011). Nursing interpersonal communication can build a therapeutic relationship because clients feel cared for and valued by nurses. Interpersonal communication is a tool for nurses to influence the client's behavior in implementing nursing orders. The process of behavior change in goal attainment theory is a transaction process. When nurses interact with clients, family perception will arise as a consideration in the action. Clients and families as individuals also have a perception

of the nurse so as to bring also consideration for action. The action consideration of nurses and clients reacts when clients and family ask for help to the nurse to do nursing care to the client at home because it has established a sense of trust from positive perceptions. The nurse also has a positive perception so that it reacts to help solve health problems professionally. The reaction becomes an interaction between nurses, clients and families and develops a joint nursing action plan to solve problems and achieve goals to improve the quality of family nursing care (King, in Gonzalo, 2011).

Another indicator of nursing relational capital in the model of family nursing care is cooperation with other health teams (Interprofessional collaboration). In this study, cooperation with other health teams is an indicator because it is considered important for the successful implementation of family nursing care. The American Medical Association (AMA) (in Nandang AW, 2012) describes collaboration as a process where doctors and nurses plan and practice collectively as colleagues, working interdependently within the scope of practice in their respective professions by sharing values and mutual recognition as well as respect for everyone who contributes to caring for individuals, families and communities.

The scientific finding of this research is that the formation of nursing relational capital (NRC) family nursing model can improve performance. The model was built by integrating the theory of nursing intellectual capital, goal attainment theory and family center nursing theory. Indicators of nursing relational capital consist of personal interpersonal and interprofessional collaboration. Nursing relational capital is a new finding, the development of the theory of performance of nursing intellectual capital by integrating goal attainment theory. The definition of nursing care of family based on nursing relational capital is a series of nurses' interaction process with themselves, clients, family and the environment and with other health teams to meet the needs and independence of clients and families.

### **Conclusion and Recommendations**

Many factors affect nursing relational capital, including nursing human capital, client factor, and family. Nursing relational capital affects the performance of nurses in implementing family

nursing care. Structural capital nursing and nursing human capital directly affect the performance of nurses. The implementation of this model requires the involvement of policy makers, cross-program cooperation and integrated reporting so that the performance of nurses in implementing family nursing care can improve.

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